Hypothesis / aims of study
To find out the prevalence of various urinary and bowel problems in gynaecologic malignancies as compared with benign conditions.

Study design, materials and methods
In this cross sectional study, all participants (case study group n=100, control group n=100) were addressed with a questionnaire covering various urinary and bowel symptoms. The various definitions used were as those of the International Continence Society and the standard definitions from the text books. The questionnaire incorporating bowel symptoms was designed using a modified IBD questionnaire. 100 patients with history of gynaecologic cancer, treated with surgery, chemotherapy or radiotherapy, attending gynaec cancer clinic from October 2008 to February 2009 were included in the study group. In control group 100 patients with benign gynaecological conditions attending gynaec clinic were included.

Results
The mean age was 50.8 years in case study group and 33.8 years in control group. The mean parity was 4.1 in study group and 2.3 in control group. Among gynaecological cancers, there were cancer cervix (n=50), ovarian cancer (n=30), endometrial cancer (n=10), vulvo-vaginal cancer (n=10). Among benign cases, there were chronic cervicitis (n=25), fibroid uterus (n=30), pelvic inflammatory diseases (n=25), endometriosis (n=15), prolapse uterus(n=5). We found increased frequency of urine (≥10 per day) (25% vs 5.4%), nocturia (30% vs 5.6%), burning micturition (25% vs 3%), UTI (15% vs 1%), urinary incontinence (36.5% vs 22.4%), hematuria (15% vs 1.7%). Among urinary incontinence, urge incontinence was seen in 1% vs 2.9%, stress incontinence in 27.3% vs 18%, true incontinence was seen in 7.5% vs 0.03% and mixed incontinence in 0.7% vs 1.47%.
Among bowel symptoms, there was frequency of stool (35.8% vs 5.3%), constipation (30% vs 7.4%), gas incontinence (28.8% vs 5.8%), incontinence of loose stools(44% vs 2.4%), underwear soil by stool leakage(27% vs 0.03%), use of any pads (21% vs 0.03%), feeling of incomplete emptying (37% vs 4.0%), return to toilet within one hour of defecation (35% vs 0.02%), inability to defer defecation for > 10 mins(28.9% vs 4.5%), inability to distinguish between gas and stool (25% vs 0.03%), associated abdominal pain (30% vs 6.5%).

Interpretation of results
Among cancer patients, cervical cancer treated with surgery and radiotherapy +/- chemotherapy presented hematuria(35%), bleeding per rectum (64%), tenesmus (37.6%). Ovarian cancer patients treated with surgery +/- chemotherapy expressed constipation (50%), abdominal discomfort (60%), bloating sensation (30%), altered bowel habits (15%). Vulvovaginal cancer patients had dysuria (30%), urgency (25%), urinary incontinence (18.4%), altered bowel habits (10.2%). Among benign gynaecological conditions, prolapse uterus had predominant urinary symptoms like stress urinary incontinence (28.8%), urge incontinence (11%), mixed incontinence (21%), constipation (38%). Fibroid uterus contributed to increased frequency of micturition (28.8%), burning micturition (10%), abdominal discomfort (30%).

Concluding message
There is a high prevalence of urinary and bowel problems in gynaecological malignancies as compared with benign conditions.

Key words
Gynaecologic malignancy, Radiotherapy, Chemotherapy, Bladder symptoms, Bowel symptoms.

References
2. Br J Cancer 2005; May 9;92(1663-70)